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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO	
09/938,072	08/23/2001	Ulrich Fotheringham	WEI0026	WEI0026 1658	
832 75	590 02/02/2004		EXAMINER		
BAKER & DANIELS 111 E. WAYNE STREET SUITE 800			HUG, ERIC J		
			ART UNIT	PAPER NUMBER	
FORT WAYN	E, IN 46802		1731		
			DATE MAILED: 02/02/200-	4	

Please find below and/or attached an Office communication concerning this application or proceeding.

<u> </u>	•	Application	n No.	Applicant(s)	\ _				
		09/938,072	2	FÖTHERINGHAM	ET AL.				
Office Action Summary		Examiner		Art Unit					
		Eric Hug		1731					
	- The MAILING DATE of this commu	nication appears on the	cover sheet with the co	rrespondence ad	dress				
Period fo			NEVELOE A MONTH/O	S) EDOM					
THE N - Exten after S - If the - If NO - Failur - Any re	DRTENED STATUTORY PERIOD MAILING DATE OF THIS COMMUI sions of time may be available under the provisio SIX (6) MONTHS from the mailing date of this corperiod for reply specified above is less than thirty period for reply is specified above, the maximum re to reply within the set or extended period for reply received by the Office later than three month of patent term adjustment. See 37 CFR 1.704(b).	NICATION.  ns of 37 CFR 1.136(a). In no even nmunication. (30) days, a reply within the statu statutory period will apply and will bly will by statute. cause the appli	nt, however, may a reply be time cory minimum of thirty (30) days expire SIX (6) MONTHS from the cation to become ABANDONED	ely filed will be considered timel ne mailing date of this c	y. ommunication.				
Status					•				
1)⊠	Responsive to communication(s) f								
,	This action is <b>FINAL</b> .	2b)⊠ This action is no							
3)□	3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.								
Dispositi	on of Claims								
	Claim(s) 1 and 3-23 is/are pending in the application.								
	4a) Of the above claim(s) <u>12-18</u> is/	are withdrawn from con	sideration.						
•	Claim(s) is/are allowed.								
	Claim(s) <u>1,3-11 and 19-23</u> is/are rejected.								
	Claim(s) is/are objected to.	riotion and/or alaction re	vauirement						
•	Claim(s) are subject to rest	nction and/or election re	· ·						
	on Papers								
	The specification is objected to by		oted or b) abjected t	a by the Evamine	ar.				
10)⊠	The drawing(s) filed on 23 August				āi.				
	Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).								
11)	The oath or declaration is objected								
, —	under 35 U.S.C. §§ 119 and 120								
12)⊠ a)∣	Acknowledgment is made of a cla All b) Some * c) None of  1. Certified copies of the priori  2. Certified copies of the priori  3. Copies of the certified copies	ty documents have been ty documents have been so of the priority docume	n received. n received in Application nts have been receive	on No	Stage				
13)∏ <i>F</i> s 3 a	application from the Interna See the attached detailed Office ac Acknowledgment is made of a clain ince a specific reference was included T CFR 1.78.  The translation of the foreign Acknowledgment is made of a clain	tion for a list of the certing for domestic priority ure ded in the first sentence anguage provisional ap	ied copies not receive ider 35 U.S.C. § 119(e of the specification or plication has been rec	<ul> <li>e) (to a provisional in an Applicational</li> <li>eived.</li> </ul>	Data Sheet.				
re	eference was included in the first s	entence of the specifica	tion or in an Applicatio	n Data Sheet. 37	CFR 1.78.				
Attachmen				(DTO 442) D	(-)				
2) Notic	ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review mation Disclosure Statement(s) (PTO-1449		<ul><li>4) Interview Summary</li><li>5) Notice of Informal P</li><li>6) Other:</li></ul>						

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## **DETAILED ACTION**

## Response to Amendment

The following is in response to the amendment filed on October 30, 2003.

## Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-11, and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK 1,383,201 in view of Miyazaki et al (US 5,588,979), Jagodzinski (US 3,615,317), and Van Zee (US 3,120,433).

As indicated in the previous office action, UK 1,383,201 discloses a process of producing glass ceramics comprising the steps of crystallization generally recited in the claims by use of radiant electric heaters. The discussion of Figs. 1, 2, 3, and 5 at pages 2-4 clearly indicates that the process temperatures are controlled and imply the use of temperature curves and a control loop. In addition, the teachings of Miyazaki are relied upon in Fig. 4 where a temperature curve is set forth. These prior art processes differ from the present invention in that Applicant provides for improvement by the use of short-wave infrared radiators with a high color temperature of greater than 1500°C for heating the glass with a thermal dead time of less than 5 seconds.

Jagodzinski discloses a process for crystallizing glass to glass-ceramics by use of highintensity infrared radiation. The use of infrared radiation heaters is considered an improvement over the use of electric heaters by Jagodzinski, because the exposure times necessary to induce Application/Control Number: 09/938,072

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crystallization are reduced generally from hours to minutes, or even seconds. More precise control of the heating of glass is also realized. Crystallization is effected by using infrared in the wavelength range of 0.8 to 2.5 microns (column 2, lines 38-47), which is the short wavelength range for infrared light. The exposure time can vary from 45 seconds to 30 minutes (column 2, lines 62-66). Therefore, Jagodzinski teaches short heat-treatment times using short wave infrared light. Given the short exposure times, it appears that the instant thermal dead time is an inherent quality of these short wave radiators. Van Zee, in particular the graph of Figure 4, is cited here as evidence to exemplify that radiant energy in the short-wave infrared range (less than 2.5 microns) clearly exceeds 1500°C (2732°F).

Therefore, at the time of the invention, it would have been obvious for one of ordinary skill in the art to have used the infrared radiators of Jagodzinski instead of electric heaters in the crystallization process in order to obtain benefits and advantages relating to faster processing times and better thermal control.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gaskell et al (US 3,809,543) is a U.S. Patent equivalent to UK 1,383,201.

Spanoudis (US 3,620,706) discloses thermal tempering of a glass body using short wave infrared radiation (0.7-3.0 microns).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571 272-1700.

ieh